AMENDMENTS TO THE SPECIFICATION:

Page 1, please add the following new paragraphs before paragraph [0001]:

[0000.2] CROSS-REFERENCE TO RELATED APPLICATIONS

[0000.4] This application is a 35 USC 371 application of PCT/DE 2004/001827 filed on August 17, 2004.

[0000.6] BACKGROUND OF THE INVENTION

Please replace paragraph [0001] with the following amended paragraph:

[0001] ~~Prior Art~~ **Field of the Invention**

Please replace paragraph [0002] with the following amended paragraph:

[0002] The present invention relates to a rotor for an electrical machine and particularly to a rotor for an EC motor with improved temperature stability, which is constructed in particular with NdFeB magnets, and to an electrical machine with such a rotor. ~~Electrical machines are known for instance in the form of electric motors, in which a ring magnet is secured to the rotor. In production, this necessitates securing the ring magnet to the rotor shaft. Typically, an adhesive is used for this. Often, the hollow-cylindrical ring magnets are also joined together with cylindrical carrier bodies (for a magnetic short circuit, often of steel) secured to the rotor shaft by means of applying adhesive in the gap between the ring magnet and the carrier body. In operation, however, because of the different coefficients of thermal expansion of the different materials for the ring magnet, the carrier body, and the adhesive, a relative motion of the components to one another occurs. Especially in the high temperature range, because of the different expansions of the materials, breakage of the ring magnet can occur. Another disadvantage of the adhesive process is putting the adhesive into the gap between the carrier~~

~~body and the ring magnet. The gap must have a certain thickness, if the adhesive process is to be at all feasible in production. The greater the spacing between the ring magnet and the carrier body, however, the higher are the magnetic losses. Moreover, the attempt has been made for several years to use rare earths as the magnet material. That material, however, in comparison to the ferritic magnet materials, has even less expansion upon a temperature increase, to the point of negative expansion; thus if these materials are used, the risk of magnet breakage increases markedly.~~

Please add the following new paragraph after paragraph [0002]:

[0002.4] Description of the Prior Art

Please add the following new paragraph after paragraph [0002.4]:

[0002.6] Electrical machines are known for instance in the form of electric motors, in which a ring magnet is secured to the rotor. In production, this necessitates securing the ring magnet to the rotor shaft. Typically, an adhesive is used for this. Often, the hollow-cylindrical ring magnets are also joined together with cylindrical carrier bodies (for a magnetic short circuit, often of steel) secured to the rotor shaft by means of applying adhesive in the gap between the ring magnet and the carrier body. In operation, however, because of the different coefficients of thermal expansion of the different materials for the ring magnet, the carrier body, and the adhesive, a relative motion of the components to one another occurs. Especially in the high temperature range, because of the different expansions of the materials, breakage of the ring magnet can occur. Another disadvantage of the adhesive process is putting the adhesive into the gap between the carrier body and the ring magnet. The gap must have a certain thickness, if the adhesive process is to be at all feasible in production. The greater the spacing between

the ring magnet and the carrier body, however, the higher are the magnetic losses. Moreover, the attempt has been made for several years to use rare earths as the magnet material. That material, however, in comparison to the ferritic magnet materials, has even less expansion upon a temperature increase, to the point of negative expansion; thus if these materials are used, the risk of magnet breakage increases markedly.

Page 3, please replace paragraph [0003] with the following amended paragraph:

[0003] ~~Advantages of the Invention~~

SUMMARY AND ADVANTAGES OF THE INVENTION

Please replace paragraph [0004] with the following amended paragraph:

[0004] In the rotor according to the invention for an electrical machine[[,]] ~~as defined by the characteristics of claim 1, however~~, a complete temperature compensation (length compensation) can be accomplished between the parts that are made from different materials. Moreover, in the rotor of the invention for an electrical machine, the magnetic losses are minimized by means of a minimized gap between the magnet element and a component located in the interior of the magnet element. This is attained according to the invention by providing that the magnet element is secured, on at least one end located in the axial direction, by means of an elastic covering disk. Thus no adhesive needs to be provided on the inner jacket region of the magnet element, and thus the gap from an adjacent component can be selected to be markedly smaller.

Please delete paragraph [0005].

Page 5, please replace paragraph [0017] with the following amended paragraph:

[0017] ~~Drawing~~ **BRIEF DESCRIPTION OF THE DRAWINGS**

Please replace paragraph [0018] with the following amended paragraph:

[0018] ~~Below, in conjunction with the accompanying drawings, exemplary embodiments of the present invention will be described in detail. In the drawing:~~ **Other features and advantages of the invention will be apparent from the description contained below, in conjunction with the drawings, in which:**

Page 6, please replace paragraph [0026] with the following amended paragraph:

[0026] ~~Description of the Exemplary Embodiments~~

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Please delete paragraph [0027].

Please replace paragraph [0028] with the following amended paragraph:

[0028] Fig. 1 shows a perspective exploded view of a rotor assembly 1 of [[the]] **an** electrical machine[[.]] ~~The rotor assembly 1 includes~~ **embodying the invention and including** a rotor shaft 2, a carrier body 4, a hollow- cylindrical magnet element 3, a first covering disk 5, a second covering disk 6, and a guard tube 10. The carrier body 4 is secured to the rotor shaft 2. This may be accomplished by means of adhesive bonding, for instance, or by means of a press fit. The first covering disk 5 and the second covering disk 6 are likewise joined to the rotor shaft 2 in a manner fixed against relative rotation and axially fixed. The magnet element 3 is joined to one covering disk on each of its axial ends. More precisely, the axial end 3a of the magnet element 3 is joined to the first covering disk 5, and the axial end

3b is joined to the second covering disk 6 (see Fig. 2). The connection between the covering disks 5, 6 and the axial ends 3a and 3b is made by means of an adhesive. The magnet element 3 is located ~~centrally~~ **concentrically** to the rotor shaft 2.

Page 7, please replace paragraph [0031] with the following amended paragraph:

[0031] The magnet element 3 is made from a rare earth material and has a thermal expansion that differs from that of the carrier body 4 and the rotor shaft 2. The different thermal expansion is compensated for by the first and second covering disks 5 and 6. To that end, the covering disks 5 and 6 have a yielding region 7, which is furnished by means of a bead embodied as extending in the circumferential direction. Also, as shown in Fig. 3, many slits are formed in the covering disks. More precisely, long slits 8 of a first length A are formed on the one hand in the covering disks. Between the long slits 8, a plurality of small slits 9 with a length B are formed. As a result, the covering disks 5, 6 can execute a length compensation in both the radial ~~direction~~ and the axial [[end]] **directions**. To make the forces or deformations of the covering disks 5, 6 that occur upon the length compensation possible without problems, the covering disks 5, 6 are made from a nonmagnetic special steel.

Page 8, please delete paragraph [0034].

Please replace paragraph [0035] with the following amended paragraph:

[0035] **Below, in conjunction with Fig. 4, a covering disk for a rotor of the invention will be described in terms of a second exemplary embodiment of the present invention in which** ~~As Fig. 4 shows,~~ the covering disk 5 ~~in the second exemplary embodiment~~ has one

substantially cylindrical region 11 and one substantially radially oriented region 12. The cylindrical region 11 serves as a securing region on a rotor shaft. The radial region 12 includes a yielding region 13 and a retention region 14 for the magnet element. As shown in Fig. 4, the radial region 12 is located on an end of the cylindrical region 11 that is located in the axial direction. The yielding region 13 has what in section is a substantially U-shape and furnishes a spring travel in both the radial direction and the axial direction. As a result, the covering disk 5 makes a temperature compensation possible for different temperature-dictated changes in length of the magnet element and the rotor shaft. The covering disk 5 of the second exemplary embodiment is embodied in one piece and is produced for instance by stamping and creative shaping of a cylindrical tubular piece. The slits 8 between the individual radial segments of the radial region 12 are all embodied with the same depth. Moreover, the cylindrical region 11 of the covering disk assures securing to the rotor shaft in a way that is fixed against relative rotation in the circumferential direction and is fixed against displacement in the axial direction. This can be accomplished for instance by means of a press fit.

Page 9, please replace paragraph [0036] with the following amended paragraph:

[0036] Below, in conjunction with Figs. 5 and 6, a covering disk 5 in a third exemplary embodiment of the present invention will be described. The covering disk of the third exemplary embodiment corresponds substantially to the covering disk of the second exemplary embodiment and includes both a cylindrical region 11 and a radial region 12. The radial region 12 is located on one axial end of the cylindrical region 11 and includes many

tablike elements, which are oriented essentially in the radial direction. The tablike elements are each spaced apart from one another by [[a]] [[slit]] **slits** 8 of equal depth. As shown in Figs. 5 and 6, on the tablike elements both a retention region 14 for the magnet element and a connecting region 15 are embodied; the latter furnishes the connection between the cylindrical region 11 and the retention region 14.

Page 10, please replace paragraph [0037] with the following amended paragraph:

[0037] The connecting region 15 is located at a predetermined angle to the cylindrical region 11. As shown in Fig. 6, the connecting region 15 is inclined by an angle α to the securing region 11. The angle α is **preferably** approximately 60°. At different temperature-caused changes in length of the individual components, the tablike elements change their spring-back angle to the rotor shaft and to the cylindrical region 11. As a result, compensation in both the radial and the axial direction is furnished.

Please replace paragraph [0039] with the following amended paragraph:

[0039] Fig. 7 shows a rotor assembly in a fourth exemplary embodiment of the present invention. The view of the fourth exemplary embodiment corresponds substantially to the view in Fig. 2 of the first exemplary embodiment. In contrast to the exemplary embodiments described above, however, in the fourth exemplary embodiment only one covering disk 5 is used. Instead of a second covering disk, in the fourth exemplary embodiment a shaft shoulder 2a is formed on the rotor shaft 2 and has **a diameter** at least ~~the same diameter~~ as **great as** the outer diameter of the magnet element 3. As a result, the magnet element 3 on its second axial end 3b is braced on the shaft shoulder 2a. The first axial end 3a of the magnet element 3

is, as in the previous exemplary embodiments, secured to a covering disk 5. Thus this covering disk 5 in the fourth exemplary embodiment ~~takes on~~ **accommodates** all the compensation motions in the axial and radial direction. It should be noted that instead of the shaft shoulder 2a, some other separate component which is secured to the rotor shaft 2 may also be used. Otherwise, the fourth exemplary embodiment corresponds in particular to the first exemplary embodiment, so that the description of the first exemplary embodiment may be referred to.

Please add the following new paragraph after paragraph [0039]:

[0040] The foregoing relates to a preferred exemplary embodiment of the invention, it being understood that other variants and embodiments thereof are possible within the spirit and scope of the invention, the latter being defined by the appended claims.